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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/889,345	02/26/2002	Gustay Ruschmann	1704	2767

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103 East Neck Road
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EXAMINER

RODRIGUEZ, RUTH C

ART UNIT	PAPER NUMBER
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3677

DATE MAILED: 06/23/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/889,345

Applicant(s)

RUSCHMANN ET AL.

Examiner

Ruth C. Rodriguez

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 26 February 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-10 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 26 February 2002 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- 1) ☐ Certified copies of the priority documents have been received.
 - 2) ☐ Certified copies of the priority documents have been received in Application No. _____.
 - 3) ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 1.5.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

DETAILED ACTION

Drawings

1. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the non-positive engagement between the ring and the shaft must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Claim Objections

2. Claim 1 is objected to because of the following informalities: Claim 1 recites "nonpositive-engagement" between the seventh and eighth lines. This is considered a negative recitation and negative recitations do not have any patentable weight. Additionally, the Examiner can interpret this limitation as any type of engagement because the specification and the drawings fail to disclose what can be considered a positive and a nonpositive engagement. Correction is required.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1-5, 7 and 9 are rejected under 35 U.S.C. 102(b) as being anticipated by Tsumuki et al. (US 4,438,555).

A device connects a shaft (2) to a ring (3). The shaft is characterized in that on the outside face of the shaft, there are deformation regions (8), by means of which a non-positive engagement assure a rotationally fixed connection of the ring to the shaft (Fig. 1).

The deformation regions are distributed regularly in the radial direction over the outside face of the shaft (Figs. 1, 5 and 6).

The deformation regions are formed by at least two impressed features (Figs. 1, 5 and 6).

The impressed features have a conical shape (Figs. 1, 4a-6).

The cone of the impressed features is between 50 degrees and 70 degrees, and is preferably 60 degrees (Figs. 4a and 4b).

Characterized in that two of the impressed features at a time are disposed in pairs (Figs. 1, 5 and 6)

Characterized in that the deformation regions are disposed approximately centrally in the axial direction to the inside face (Fig. 1).

5. Claims 1-3 and 7-10 are rejected under 35 U.S.C. 102(b) as being anticipated by Sugiuchi et al. (US 4,620,454).

A device connects a shaft (3) to a ring (2). The shaft is characterized in that on the outside face of the shaft, there are deformation regions (made by 11,12,21,22), by means of which a non-positive engagement assure a rotationally fixed connection of the ring to the shaft (Figs. 1, 4 and 5).

The deformation regions are distributed regularly in the radial direction over the outside face of the shaft (Figs. 1, 4 and 5).

The deformation regions are formed by at least two impressed features (Figs. 1, 4 and 5).

Characterized in that two of the impressed features at a time are disposed in pairs (Figs. 1, 4 and 5).

Characterized in that the impressed features are offset by 180 degrees from one another (Figs. 1, 4 and 5).

Characterized in that the deformation regions are disposed approximately centrally in the axial direction to the inside face (Fig. 1, 4 and 5).

Characterized in that in addition to the impressed features, radially extending indentations are present on the outside face of the shaft (Figs. 4 and 5).

6. Claims 1-5, 7 and 9 are rejected under 35 U.S.C. 102(b) as being anticipated by French Patent Document FR 806 791 A.

A device connects a shaft (1,1',1'') to a ring (5,5'). The shaft is characterized in that on the outside face of the shaft, there are deformation regions (3), by means of which a non-positive engagement assure a rotationally fixed connection of the ring to the shaft (Figs. 1-6).

The deformation regions are distributed regularly in the radial direction over the outside face of the shaft (Figs. 3-5).

The deformation regions are formed by at least two impressed features (Figs. 3-5).

The impressed features have a conical shape (Figs. 3-5).

The cone of the impressed features is between 50 degrees and 70 degrees, and is preferably 60 degrees (Figs. 3-5).

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Tsumuki.

Tsumuki discloses a device having all the features listed above in paragraph 4 for the rejection of claim 4. Tsumuki fails to disclose that the maximum diameter of the impressed features is between 1.5 mm and 2.4 mm and is preferably 1.9 mm.

However, it would have been obvious to one having ordinary skill in the art at the time of applicant's invention to have the maximum diameter of the impressed features is between 1.5 mm and 2.4 mm and is preferably 1.9 mm because a change in the size of a prior art device is a design consideration within the skill of the art. In re Rose, 220

F.2d 459, 105 USPQ 237 (CCPA 1955). Especially since the applicant states that this dimension is the preferred dimension but fails to provide any reason why it is best to use this specific dimension.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Kanamura (US 4,249,298), Yamaji et al. (US 4,781,075), Egner-Walter (US 6,099,195), Aota et al. (US 6,428,236 B2), Suzuki et al. (US 2002/0041790 A1), Japanese Patent Document JP 55-94740, Japanese Patent Document JP 404277321 A, Japanese Patent Document JP 5-10340, Japanese Patent Document JP 6-200951 and Japanese Patent Document JP 6-221333 are cited to show state of the art with respect to a device for connecting a ring to a shaft having some of the features claimed under the current application.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ruth C Rodriguez whose telephone number is (703) 308-1881. The examiner can normally be reached on M-F 07:15 - 15:45.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, J. J. Swann can be reached on (703) 306-4115.

Submissions of your responses by facsimile transmission are encouraged. Technology center 3600's facsimile number for before final communications is (703)

Responses submitted by facsimile transmission should include a Certificate of Transmission (MPEP § 512). The following is an example of the format the certification might take:

(Signature)

If your response is submitted by facsimile transmission, you are hereby reminded that the original should be retained as evidence of authenticity (37 CFR 1.4 and MPEP § 502.02). Please do not separately mail the original or another copy unless required

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by the Patent and Trademark Office. Submission of the original response or a follow-up copy of the response has been transmitted by facsimile will cause further unnecessary delays in the processing of your application, duplicate responses where fees are charged to a deposit account may result in those fees being charged twice.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-1113.

Ruth C. Rodriguez
Patent Examiner
Art Unit 3677

RCR
rcr
June 9, 2003


J. J. SWANN
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 3600